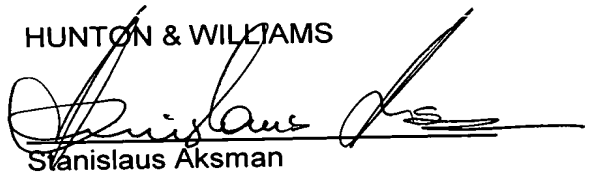
II. REQUEST FOR ALLOWANCE

Applicant submits that the application is in condition for allowance, an indication of which is solicited.

Respectfully submitted,

HUNTON & WILLIAMS

Date: April 12, 2002 By: 

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APPENDIX A

I. On Page 2, lines 20-22, please delete the paragraph and replace it with the following replacement paragraph.

There is the need in the art for additional materials for use as an artificial cartilage such as in weight-bearing joints. The present invention is directed to a material and prosthetic device for use in the treatment of arthritis and to supplement or replace cartilage.

II. On Page 3, lines 1-5, please delete the paragraph and replace it with the following replacement paragraph.

A central object of the invention is to provide a hydrogel for use [in the] in the treatment or prevention of arthritis, said hydrogel obtainable by combining acrylamide and methylene bis-acrylamide in amounts so as to give about 0.5 to 25% by weight polyacrylamide, based on the total weight of the hydrogel; radical initiation; and washing with pyrogen-free water or saline solution.

III. On Page 7, line 29 to page 8, line 2, please delete the paragraph and replace it with the following replacement paragraph.

The prosthetic device may comprise any embodiment of the hydrogel as described supra. [According] Accordingly, the device is used for augmenting or replacing cartilage in the intra-articular cavity of a joint, said device comprises a polyacrylamide hydrogel comprising 0.5 to 25% by weight polyacrylamide, based on the total weight of the hydrogel. In [T]the prosthetic device of the invention the hydrogel typically further comprises at least 75% by weight pyrogen-free water or saline solution, preferably pyrogen-free water. It may be administered by implantation or injection into the intra-articular cavity of a joint. Preferably, the device is injected.

IV. On Page 9, lines 21-26, please delete the paragraph and replace it with the following replacement paragraph.

As stated, in embodiments wherein the hydrogel is [as] a low viscosity formulation, the hydrogel attempts to mimic, at least in part, the features of synovial liquid. In embodiments where the hydrogel is of higher viscosity formulation, such as a viscosity

above 10 Pa s, such as above 15 Pa s, the hydrogel mimics more the combined features of synovial liquid and cartilage in that the hydrogels are more elastic materials with infinite relaxation times.

V. On Page 9, line 33 to page 10, line 3, please delete the paragraph and replace it with the following replacement paragraph.

The device may be administered into an array of intra-articular cavities where said joint or cartilage present in said joint may need increased lubrication, increased weight bearing capacity, or increased protection of the opposing bones of the joint, such as but not limited to the group comprising [of] the knee joint; hip joint; the elbow, the metacarpal-phalangeal and interphalangeal joints in hands and feet [please comment as to other relevant joints].

VI. On page 15, line 10, please delete the paragraph and replace it with the following replacement paragraph.

g) pre-[eash]<u>wash</u> values - washing typically reduces value by 20-40%

APPENDIX B

1. (Once Amended) A hydrogel for use in the treatment or prevention of arthritis, said hydrogel comprising [obtainable by combining acrylamide and methylene bis-acrylamide in amounts so as to give] about 0.5 to 25% by weight polyacrylamide, based on the total weight of the hydrogel[, under conditions of radical initiation, and washing with pyrogen-free water or saline solution].

2. (Once Amended) The hydrogel according to claim 1, which is made by combining [wherein said] acrylamide and methylene bis-acrylamide [are combined] in a molar ratio of 150:1 to 1000:1.

3. (Once Amended) The hydrogel according to claim 1, comprising less than 15% by weight polyacrylamide, based on the total weight of the hydrogel[, preferably less 10%, more preferably less than 7.5%, even more preferably less than 5%, most preferably less than 3.5% by weight polyacrylamide, based on the total weight of the hydrogel].

4. (Once Amended) The hydrogel according to claim 3 comprising at least 1% by weight polyacrylamide, based on the total weight of the hydrogel[, preferably at least 1.5%, such as 1.6% by weight polyacrylamide, based on the total weight of the hydrogel].

5. (Once Amended) The hydrogel according to claim 1 further comprising at least 75% by weight pyrogen-free water or saline solution[, preferably pyrogen-free water].

6. (Once Amended) The hydrogel according to claim 1 [7] comprising at least 80% by weight pyrogen-free water or saline solution[, preferably at least 85%, more preferably at least 90%, even more preferably at least 95% by weight pyrogen-free water or saline solution].

7. (Once Amended) The hydrogel according to claim 1 having a complex viscosity of 2 to 25 Pa s[, such as about 3 to 20 Pa s, preferably about 3 to 18 Pa s, most preferably about 3 to 15 Pa s].

8. (Once Amended) The hydrogel according to claim 1 having a complex viscosity less than 25 Pa s and an elasticity modulus less than 200 Pa[, preferably having a complex viscosity less than 15 Pa s and an elasticity modulus less than 100 Pa].

17. (Once Amended) A method of treating or preventing arthritis comprising administering a hydrogel to a mammal, said hydrogel comprising 0.5 to 25% by weight polyacrylamide, based on the total weight of the hydrogel.

18. (Once Amended) The method according to claim 17, wherein the hydrogel is [obtainable] obtained by combining acrylamide and methylene bis-acrylamide in a molar ratio of 150:1 to 1000:1.

19. (Once Amended) The method according to claim 17, wherein the hydrogel comprises less than 15% by weight polyacrylamide, based on the total weight of the hydrogel[, preferably less 10%, more preferably less than 7.5%, even more preferably less than 5%, most preferably less than 3.5% by weight polyacrylamide, based on the total weight of the hydrogel].

20. (Once Amended) The method according to claim 19, wherein the hydrogel comprises at least 1% by weight polyacrylamide, based on the total weight of the hydrogel[, preferably at least 1.5%, such as 1.6% by weight polyacrylamide, based on the total weight of the hydrogel].

21. (Once Amended) The method according to claim 17, wherein the hydrogel has a complex viscosity of about 2 to 25 Pa s[, such as about 3 to 20 Pa s, preferably about 3 to 18 Pa s, most preferably about 3 to 15 Pa s].

22. (Once Amended) The method according to claim 17, wherein the hydrogel further comprises at least 75% by weight pyrogen-free water or saline solution[, preferably pyrogen-free water].

23. (Once Amended) The method according to claim 22, wherein the hydrogel comprises at least 80% by weight pyrogen-free water or saline solution[, preferably at least 85 %, more preferably at least 90%, even more preferably at least 95% by weight pyrogen-free water or saline solution].

27. (Once Amended) A prosthetic device [for the treatment of arthritis][, wherein the device comprises] comprising a polyacrylamide hydrogel comprising about 0.5 to 25% by

weight polyacrylamide, based on the total weight of the hydrogel, said device administered to the intra-articular cavity of a joint.

28. (Once Amended) The prosthetic device according to claim 27, wherein the hydrogel further comprises at least 75% by weight pyrogen-free water or saline solution[, ~~preferably pyrogen-free water~~].

29. (Once Amended) A prosthetic device for augmenting or replacing cartilage in the intra-articular cavity of a joint, said device comprises a polyacrylamide hydrogel comprising about 0.5 to 25% by weight polyacrylamide, based on the total weight of the hydrogel.

30. (Once Amended) The prosthetic device according to claim [29] 27, wherein the hydrogel further comprises at least 75% by weight pyrogen-free water or saline solution[, preferably pyrogen-free water].

31. (Once Amended) The prosthetic device according to claim 27, implanted or injected into the intra-articular cavity of a joint[, preferably injected].

35. The prosthetic device according to claims 27 or [28] 29, wherein the joint [comprises] is selected from the group consisting of a knee joint, a hip joint, [or the] a metacarpal-phalangeal joint in a hand or foot, and an interphalangeal joint in a hand or foot [or interphalangeal joints in hands and feet].